

claim 39 under 35 U.S.C. §103(a) over Schmid in view of Kye, and further in view of Mizuno. The rejections are respectfully traversed.

Schmid, Kye, Uchida and Mizuno fail to disclose and would not have rendered obvious the claimed Young's modulus range. In particular, one of ordinary skill in the art would have no reason for modifying the applied references to include the claimed Young's modulus range.

The Office Action asserts that it would have been obvious to a person of ordinary skill in the art to find an optimal Young's modulus range for the adhesive of Schmid. To support this assertion, the Office Action relies on Kye to allegedly teach that the Young's modulus of an epoxy resin is a result effective variable and that altering the composition of the epoxy resin results with different Young's modulii. However, as argued in the September 23, 2009 Amendment and agreed upon in the April 13, 2010 personal interview, merely listing a wide range of adhesive compositions with a wide range of Young's moduli fails to establish that the Young's modulus of an adhesive is a result-effective variable. Importantly, the Office Action fails to provide the result that optimizing the Young's modulus achieves. Merely listing the wide range does not provide an effect of changing the Young's modulus within the context of fuel cell stacks. In other words, Kye does not provide any guidance to vary the Young's modulus to achieve a particular result in the application of using adhesives in fuel cell stacks.

Furthermore, Mizuno teaches away from the claimed Young's modulus range. Mizuno expressly states that a peeling strength of a fuel cell of not greater than 0.3 to 0.4 kg/cm causes a gas leak and results in poor reliability for the gas sealing property (Mizuno, paragraph [0064]). Thus, Mizuno discloses that the peeling strength of an adhesive used in a fuel cell must be at least greater than 0.4 kg/cm (Mizuno, paragraph [0064]). Additionally, Mizuno recites, "the adhesive used for bonding the electrolyte film 21 to the separators 24

and 25 has the modulus of elasticity of not greater than 10 MPa or more preferably not greater than 5 MPa" to achieve the desired peeling strength (Mizuno, paragraph [0069]).

Importantly, Mizuno further recites "[a]nother adhesive may, however, be used for the same purpose, as long as the adhesive has the modulus of elasticity of not greater than 10 MPa or more preferably not greater than 5 MPa after cure," (emphasis added) (Mizuno, paragraph [0078]). The discussion in paragraph [0078] does not merely discuss one embodiment, or one preferred embodiment, but discloses that the any adhesive used must have a modulus of elasticity (i.e., Young's modulus) of no greater than 10 MPa.

Therefore, one of ordinary skill would have no reason to modify the applied references to include the claimed Young's modulus range, and claim 27 is patentable over the applied references.

Claims 28-39 depend from independent claim 27. Therefore, those claims are patentable at least for their dependence from claim 27 as well as for the additional features those claims recite.

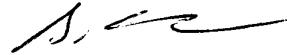
Withdrawal of the rejection is respectfully requested.

### **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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